Claims

1. A compound of the formula

$$R^{1} \xrightarrow{(CH_{2})_{m}} N \xrightarrow{R^{2}} H \xrightarrow{N} O \xrightarrow{R^{4}} O \xrightarrow{N-R^{3}} (I),$$

in which

R¹ is heteroaryl,

where heteroaryl can be substituted by 0, 1, 2 or 3 substituents R¹⁻¹, the substituents R¹⁻¹ being selected independently of one another from the group consisting of halogen, alkyl, nitro, amino, alkylamino, cyano, trifluoromethyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydroxyl, alkoxy, aryloxy, benzyloxy, carboxyl, alkoxycarbonyl, aminocarbonyl, alkylcarbonylamino, alkylaminocarbonyl and aminosulfonyl,

or

R¹ is aryl,

where aryl is substituted by 1, 2 or 3 substituents R¹⁻², the substituents R¹⁻² being selected independently of one another from the group consisting of halogen, alkyl, nitro, amino, alkylamino, cyano, trifluoromethyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, hydroxyl, alkoxy, aryloxy, benzyloxy, carboxyl, alkoxycarbonyl, aminocarbonyl,

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alkylcarbonylamino, arylcarbonylamino, alkylaminocarbonyl and aminosulfonyl,

or

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two substituents R¹⁻², together with the carbon atoms to which they are attached, form a cycloalkyl or heterocyclyl which can be substituted by 0, 1 or 2 substituents R¹⁻²⁻¹, the substituents R¹⁻²⁻¹ being selected independently of one another from the group consisting of halogen, nitro, amino, trifluoromethyl, hydroxyl, alkyl and alkoxy,

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R² is hydrogen or methyl,

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is hydrogen, hydroxyl, amino, C_1 – C_3 alkyl, benzyl, C_1 – C_3 alkoxy, benzyloxy, C_1 – C_3 alkylamino, C_1 – C_3 alkylcarbonylamino, phenylcarbonylamino or benzylcarbonylamino,

 R^4 is hydrogen or C_1 – C_3 alkyl,

 R^3

R⁵ is halogen, trifluoromethyl, trifluoromethoxy, nitro, amino, alkylamino, hydroxyl, alkyl, alkoxy, carboxyl, alkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, aryl or heteroaryl,

or

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two substituents R⁵ together with the carbon atoms to which they are attached form a cycloalkyl or heterocyclyl each of which may be substituted by 0, 1 or 2 substituents R⁵⁻¹, the substituents R⁵⁻¹ being selected independently of one another from the group consisting of halogen, nitro, amino, trifluoromethyl, hydroxyl, alkyl and alkoxy,

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R⁶ is alkyl, cycloalkyl, cycloalkenyl or heterocyclyl,

it being possible for R⁶ to be substituted by 0, 1 or 2 substituents R⁶⁻¹, the substituents R⁶⁻¹ being selected independently of one another from the group consisting of halogen, nitro, amino, trifluoromethyl, hydroxyl, alkyl and alkoxy,

n is a number 0, 1, 2 or 3,

it being possible for the radicals R⁵ to be identical or different when n is 2 or 3,

m is a number 0, 1, 2, 3 or 4,

A is aryl or heteroaryl,

or a salt thereof, a solvate thereof or a solvate of a salt thereof.

2. A compound as claimed in claim 1, characterized in that it corresponds to the formula

$$R^{1} \xrightarrow{(CH_{2})_{m}} N \xrightarrow{R^{2}} H \xrightarrow{R^{4}} O \xrightarrow{(Ia)}$$

in which R^1 to R^6 , A, m and n have the same definition as in formula (I).

3. A compound as claimed in claim 1 or 2, characterized in that

R¹ is pyridyl, imidazolyl, thienyl, furyl, oxadiazolyl, pyrazolyl, pyrazinyl, pyridazinyl, pyrimidinyl, quinolinyl or isoquinolinyl,

where R¹ can be substituted by 0, 1 or 2 substituents R¹⁻¹, the substituents R¹⁻¹ being selected independently of one another from the group consisting of halogen, alkyl, amino, trifluoromethyl, phenyl and alkoxy,

or

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R¹ is phenyl or naphthyl,

where phenyl or naphthyl are substituted by 1, 2 or 3 substituents R^{1-2} , the substituents R^{1-2} being selected independently of one another from the group consisting of halogen, C_1 - C_4 alkyl, dimethylamino, cyano, trifluoromethyl, 3- to 7-membered cycloalkyl, 5- or 6-membered heterocyclyl, phenyl, 5- or 6-membered heteroaryl, C_1 - C_3 alkoxy, phenyloxy, benzyloxy, phenylcarbonylamino and aminosulfonyl,

20 or

two substituents R¹⁻², together with the carbon atoms to which they are attached, form a 1,3-benzodioxole or a 1,4-benzodioxane,

25 R² is hydrogen,

R³ is hydrogen, amino, methyl, methoxy, ethoxy, methylamino or dimethylamino,

 R^4 is methyl,

R ⁵	is fluoro,	chloro,	trifluoromethyl,	C_1 - C_4	alkoxy,	methoxycarbonyl,
	C ₁ .C ₄ alky					

or

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two substituents R⁵, together with the phenyl ring to which they are attached, form a 1,3-benzodioxole or a 1,4-benzodioxane,

R⁶ is C₃–C₆ alkyl or 3- to 6-membered cycloalkyl,

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n is a number 0, 1 or 2,

and, if n is 2, the radicals R⁵ can be identical or different,

m is a number 0, 1, 2 or 3,

and

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A is phenyl, naphthyl, pyridyl, thienyl, furanyl, quinolinyl or isoquinolinyl.

- 4. A compound as claimed in any one of claims 1 to 3, characterized in that
 - R¹ is pyridyl, thienyl, furyl, quinolinyl or isoquinolinyl,

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where R^1 can be substituted by 0, 1 or 2 substituents R^{1-1} , the substituents R^{1-1} being selected independently of one another from the group consisting of halogen, C_1 - C_4 alkyl, trifluoromethyl, phenyl and C_1 - C_3 -alkoxy,

R¹ is phenyl or naphthyl,

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where phenyl or naphthyl are substituted by 1, 2 or 3 substituents R^{1-2} , the substituents R^{1-2} being selected independently of one another from the group consisting of halogen, C_1 - C_4 alkyl, dimethylamino, cyano, trifluoromethyl, 5- or 6-membered heterocyclyl, 5- or 6-membered heteroaryl, C_1 - C_3 alkoxy, phenyloxy or benzyloxy,

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or

two substituents R¹⁻², together with the carbon atoms to which they are attached, form a 1,3-benzodioxole or a 1,4-benzodioxane,

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R² is hydrogen,

R³ is hydrogen, amino, methylamino or dimethylamino,

R⁴ is methyl,

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R⁵ is fluoro, chloro, trifluoromethyl, C₁-C₃ alkoxy, C₁-C₄ alkyl, phenyl or pyridyl,

R⁶ is isopropyl, tert-butyl, isopentyl, cyclopentyl or cyclohexyl,

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n is a number 0, 1 or 2,

and, if n is 2, the radicals R⁵ can be identical or different,

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m is a number 0, 1 or 2,

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- A is phenyl, naphthyl, pyridyl, thienyl, quinolinyl or isoquinolinyl.
- 5. A compound as claimed in any one of claims 1 to 4, characterized in that
 - R¹ is pyridyl, thienyl, furyl, quinolinyl or isoquinolinyl,

where R^1 can be substituted by 0, 1 or 2 substituents R^{1-1} , the substituents R^{1-1} being selected independently of one another from the group consisting of fluoro, chloro, trifluoromethyl, C_1 - C_4 alkyl, phenyl and methoxy.

- 6. A compound as claimed in any of claims 1 to 4, characterized in that
- R¹ is phenyl or naphthyl,

where phenyl or naphthyl are substituted by 1, 2 or 3 substituents R^{1-2} , the substituents R^{1-2} being selected independently of one another from the group consisting of halogen, C_1 - C_4 alkyl, dimethylamino, cyano, trifluoromethyl, 5- or 6-membered heterocyclyl, 5- or 6-membered heteroaryl, C_1 - C_3 alkoxy, phenyloxy or benzyloxy,

or

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two substituents R¹⁻², together with the carbon atoms to which they are attached, form a 1,3-benzodioxole or a 1,4-benzodioxane.

7. A compound as claimed in any one of claims 1, 2, 5 and 6, characterized in that R² is hydrogen.

- 8. A compound as claimed in any one of claims 1 to 7, characterized in that R³ is hydrogen or amino.
- 9. A compound as claimed in any one of claims 1, 2 and 5 to 8, characterized in that R⁴ is methyl.
 - 10. A compound as claimed in any one of claims 1 to 9, characterized in that n is the number zero.
- 11. A compound as claimed in any one of claims 1 to 10, characterized in that n is the number 1, A is phenyl and R⁵ is fluoro, chloro, trifluoromethyl, alkoxy, C₁-C₄-alkyl, phenyl or pyridyl, R⁵ being positioned meta or para to the linkage site of the phenyl ring.
- 15 12. A compound as claimed in any one of claims 1, 2 and 5 to 11, characterized in that R⁶ is C₃-C₆-alkyl or 3- to 6-membered cycloalkyl.
 - 13. A compound as claimed in any one of claims 1 to 12, characterized in that m is the number zero.
 - 14. A compound as claimed in any one of claims 1 to 3 and 5 to 13, characterized in that A is phenyl, naphthyl, pyridyl, thienyl, quinolinyl or isoquinolinyl.
- 15. A process for preparing a compound of the formula (I) as claimed in claim 1, characterized in that
 - [A] a compound of the formula

in which R^2 to R^6 , A and n are as defined in claim 1, is reacted with a compound of the formula

$$R^{1}$$
 (CH₂) OH (III),

in which R1 and m are as defined in claim 1,

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[B] a compound of the formula

in which R^3 , R^4 and R^6 are as defined in claim 1, is reacted with a compound of the formula

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in which R¹, R², R⁵, A, m and n are as defined in claim 1.

- 5 16. A compound as claimed in any one of claims 1 to 14 for the treatment and/or prophylaxis of diseases.
 - 17. A medicinal product comprising at least one compound as claimed in any one of claims 1 to 14 in combination with at least one pharmaceutically compatible, pharmaceutically acceptable carrier or other excipients.
 - 18. The use of a compound as claimed in any one of claims 1 to 14 for producing a medicinal product for the treatment and/or prophylaxis of bacterial diseases.
- 15 19. A medicinal product as claimed in claim 17 for the treatment and/or prophylaxis of bacterial infections.
- 20. A method of controlling bacterial infections in people and animals by administering an antibacterially effective amount of at least one compound as claimed in any one of claims 1 to 14.